Fig. 1A.

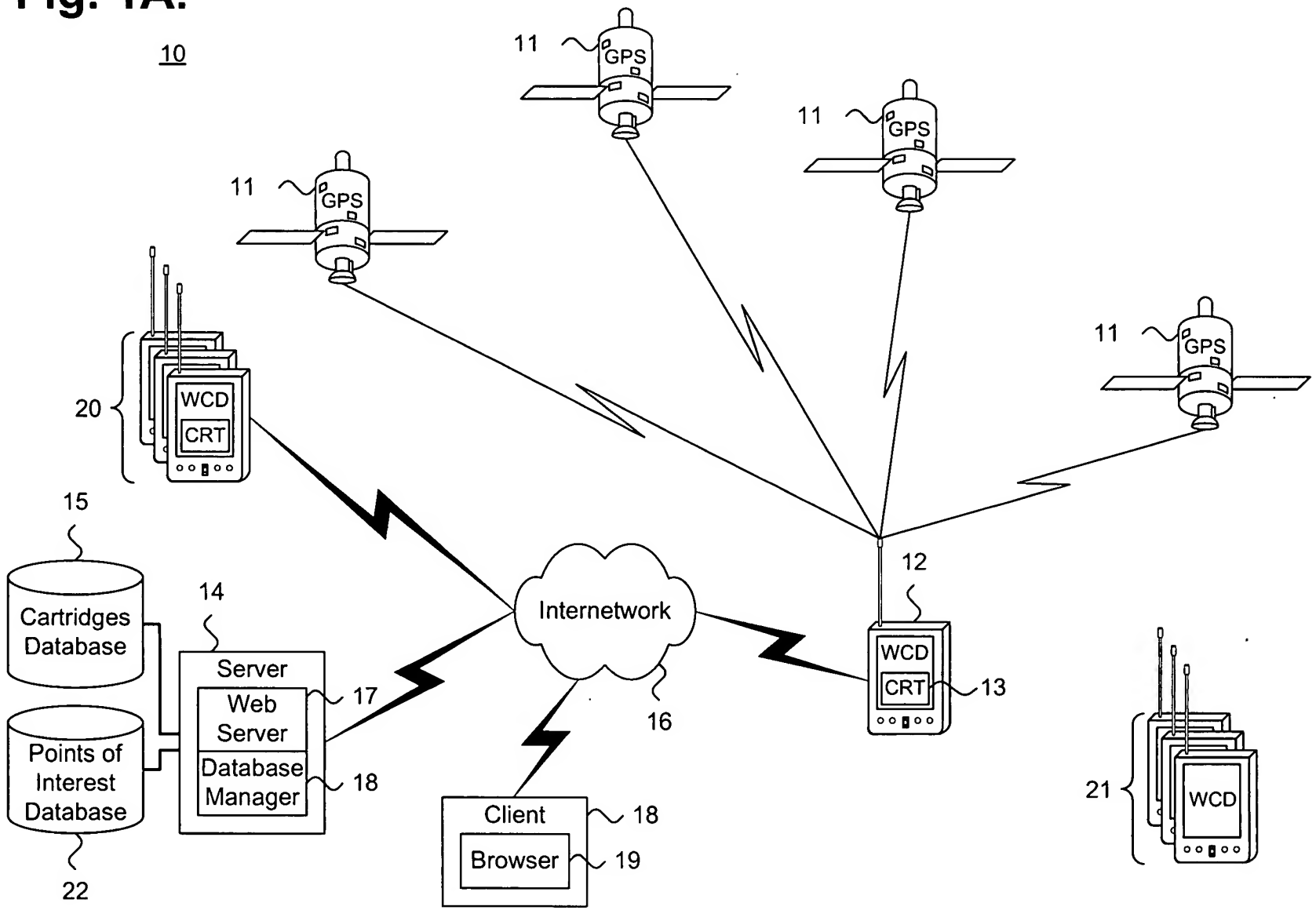

10
11
GPS
11
GPS
11
GPS
11
GPS
20
WCD
CRT
15
Cartridges Database
Points of Interest Database
22
14
Server
Web Server
17
Database Manager
18
Internetwork
16
Client
18
Browser
19
12
WCD
CRT
13
21
WCD

Fig. 1B.

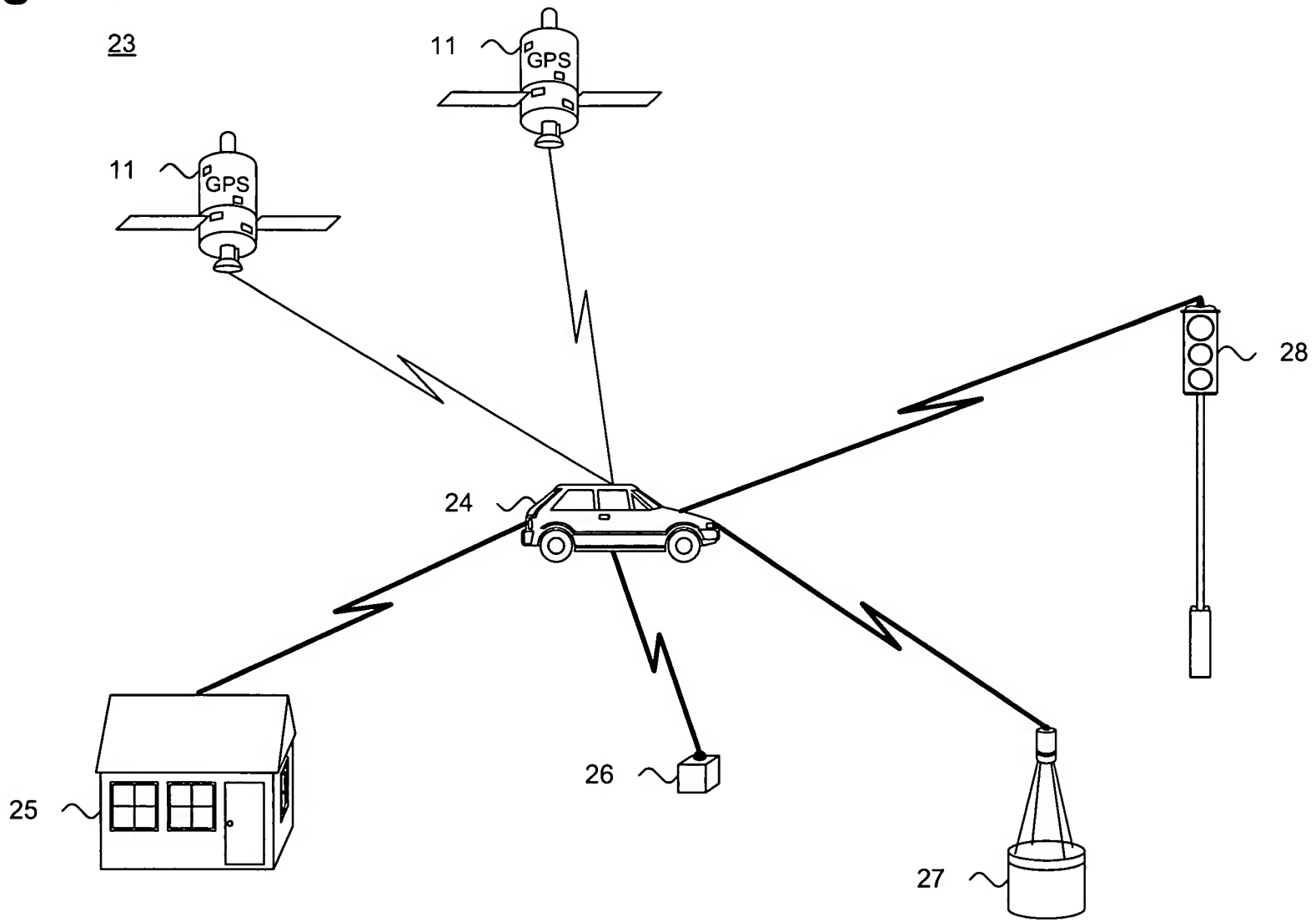


Fig. 2A.

30

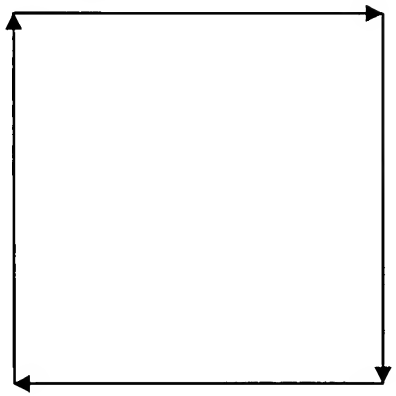


Fig. 2B.

31

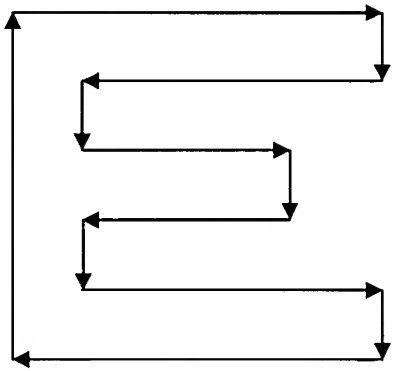


Fig. 3A.

32

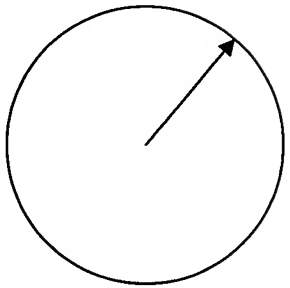


Fig. 3B.

33

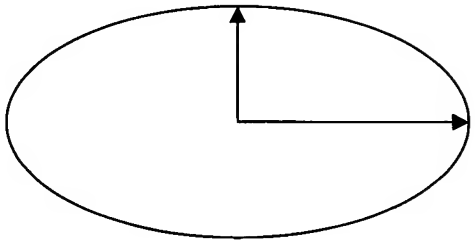


Fig. 4.

34

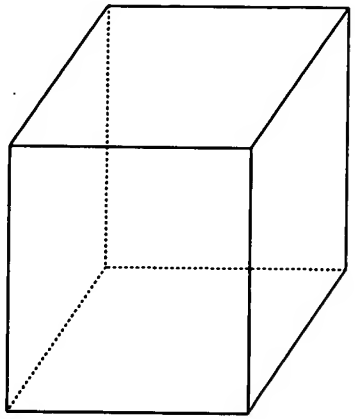


Fig. 5A.

35

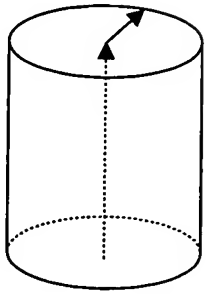


Fig. 5B.

36

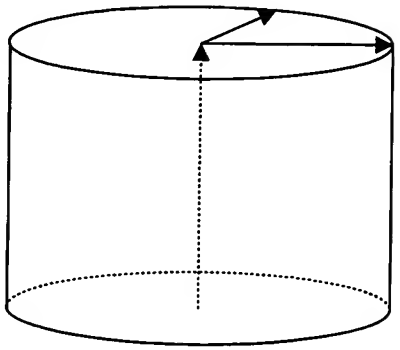


Fig. 6.

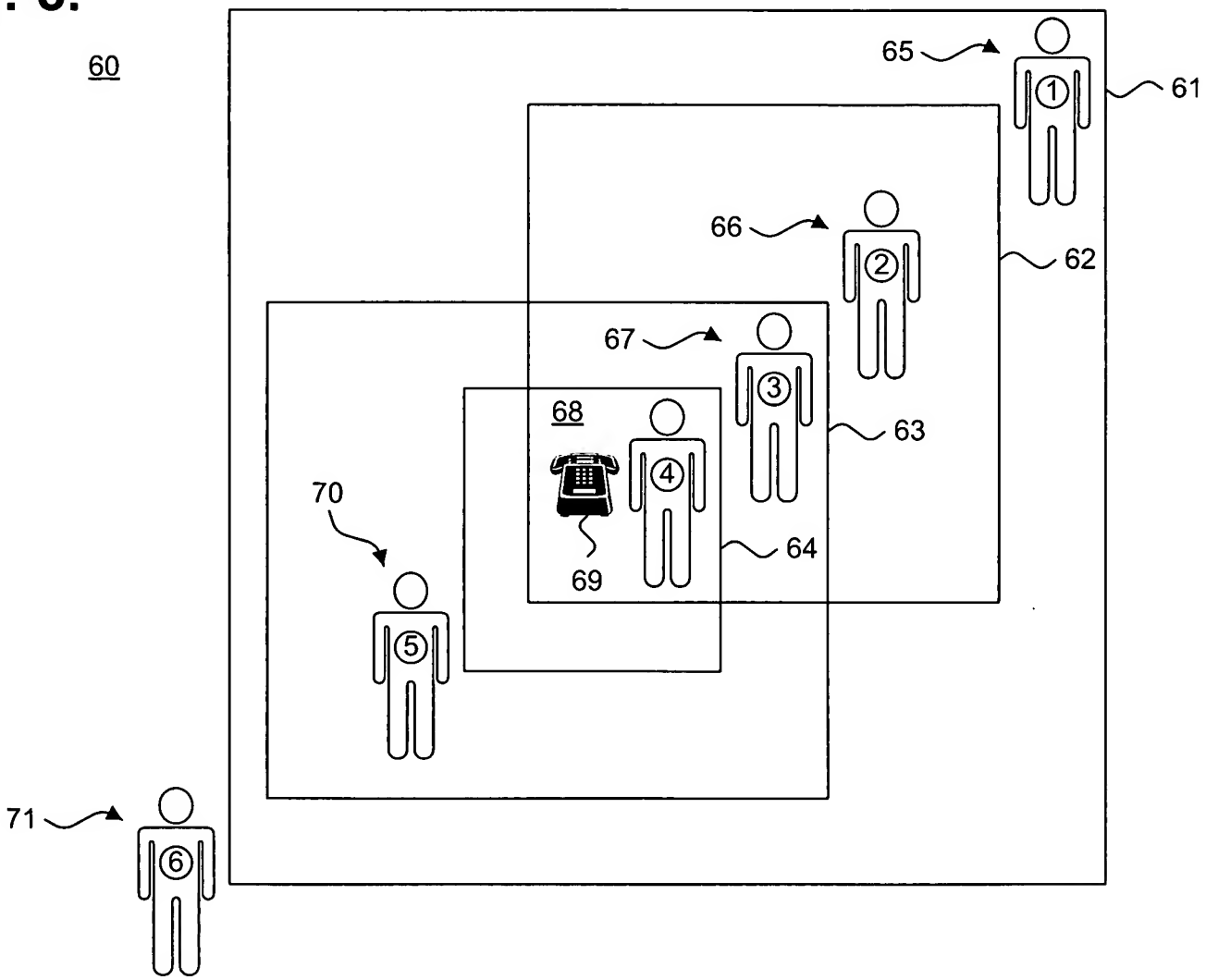


Fig. 7.

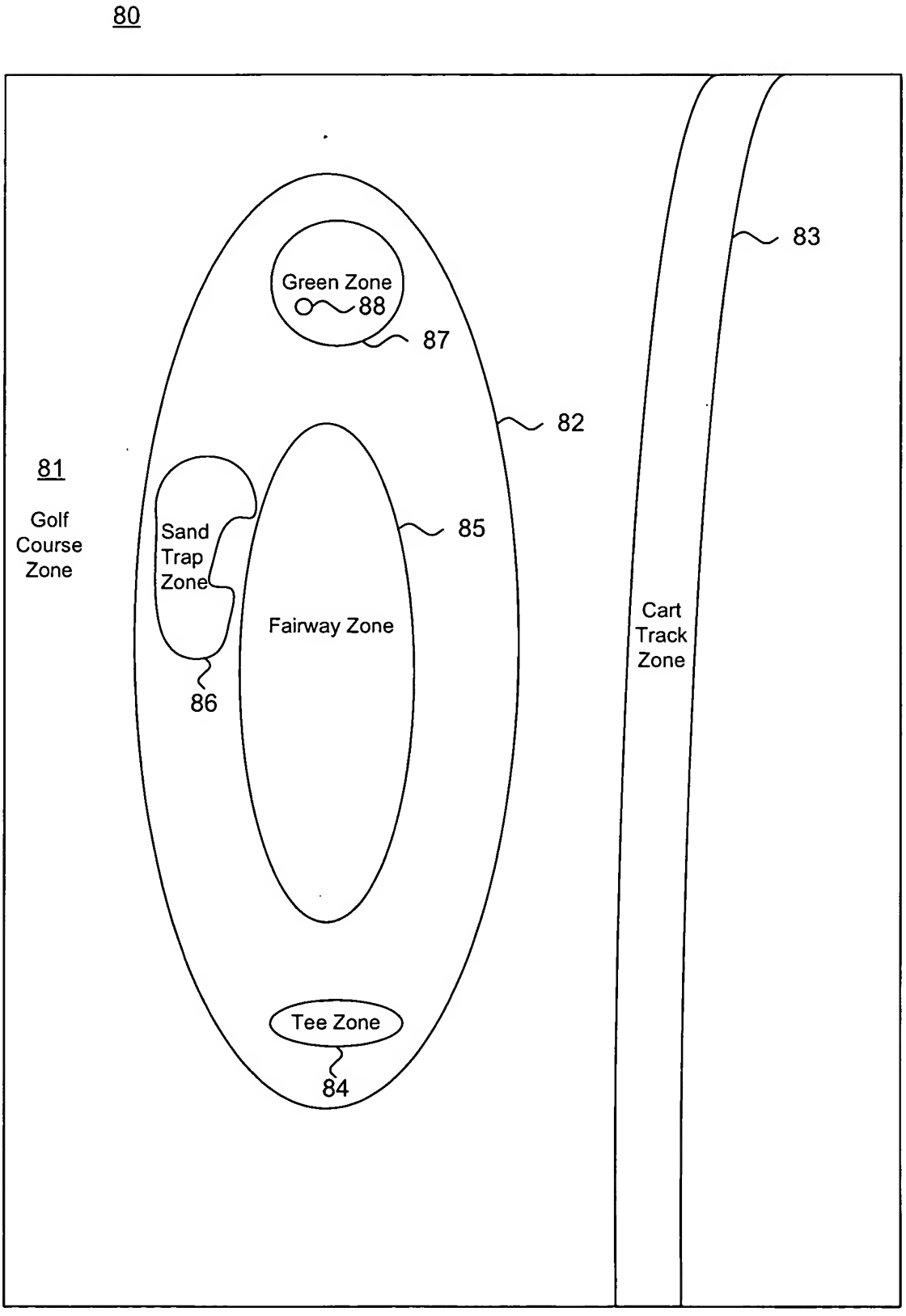

80
81
Golf Course Zone
Green Zone
88
87
82
83
Sand Trap Zone
85
Fairway Zone
86
Cart Track Zone
Tee Zone
84

Fig. 8.

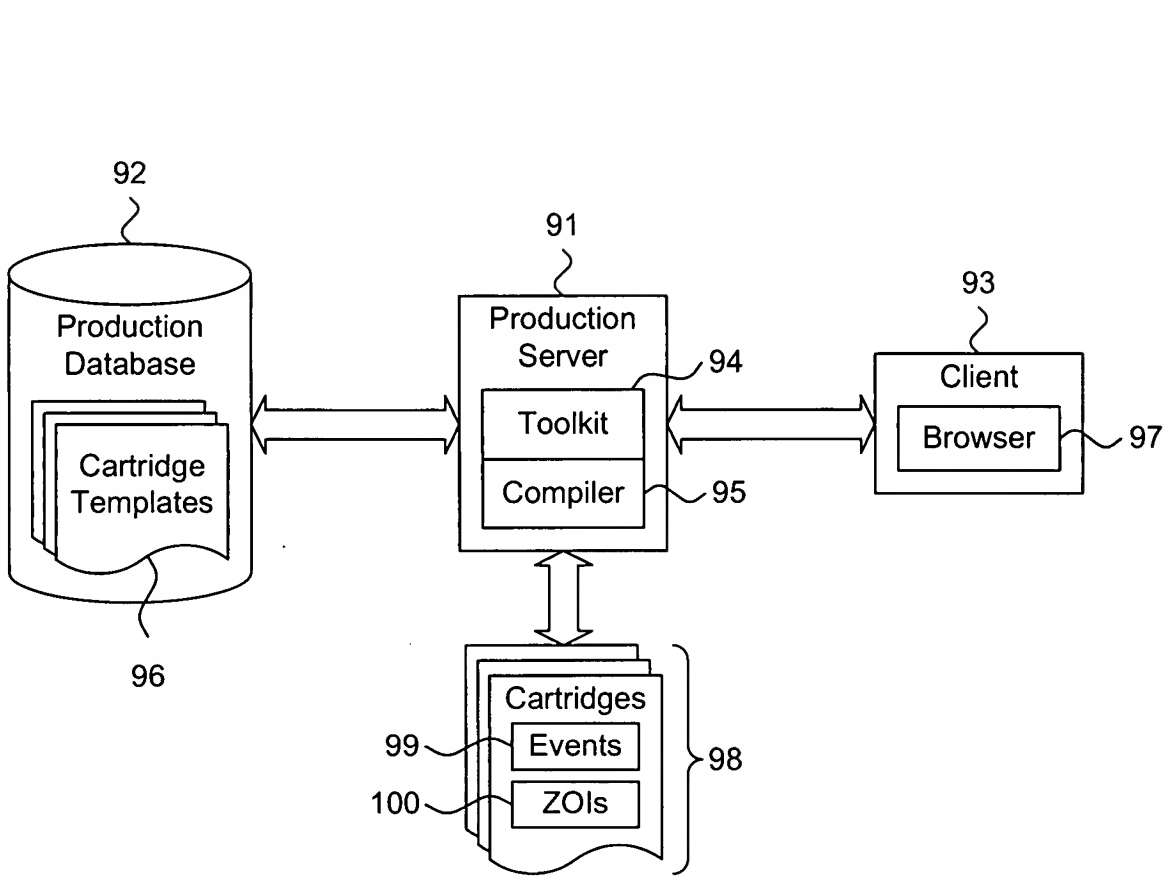

90
92
Production Database
Cartridge Templates
96
91
Production Server
94
Toolkit
Compiler
95
93
Client
Browser
97
Cartridges
99
Events
100
ZOIs
98

Fig. 9.

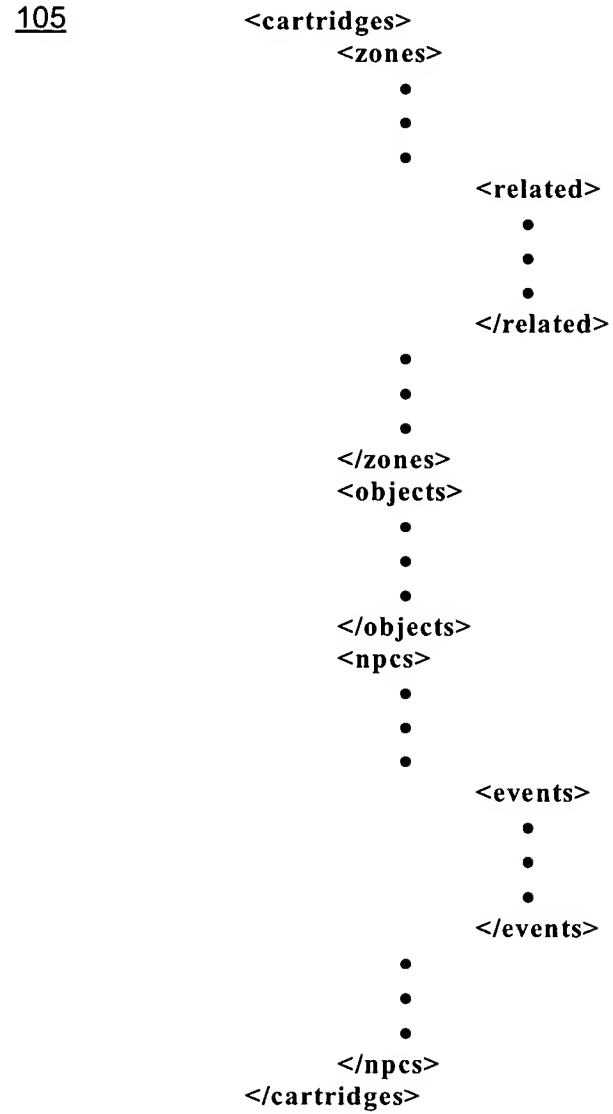

105
<cartridges>
<zones>
<related>
</related>
</zones>
<objects>
</objects>
<npcs>
<events>
</events>
</npcs>
</cartridges>

Fig. 10.

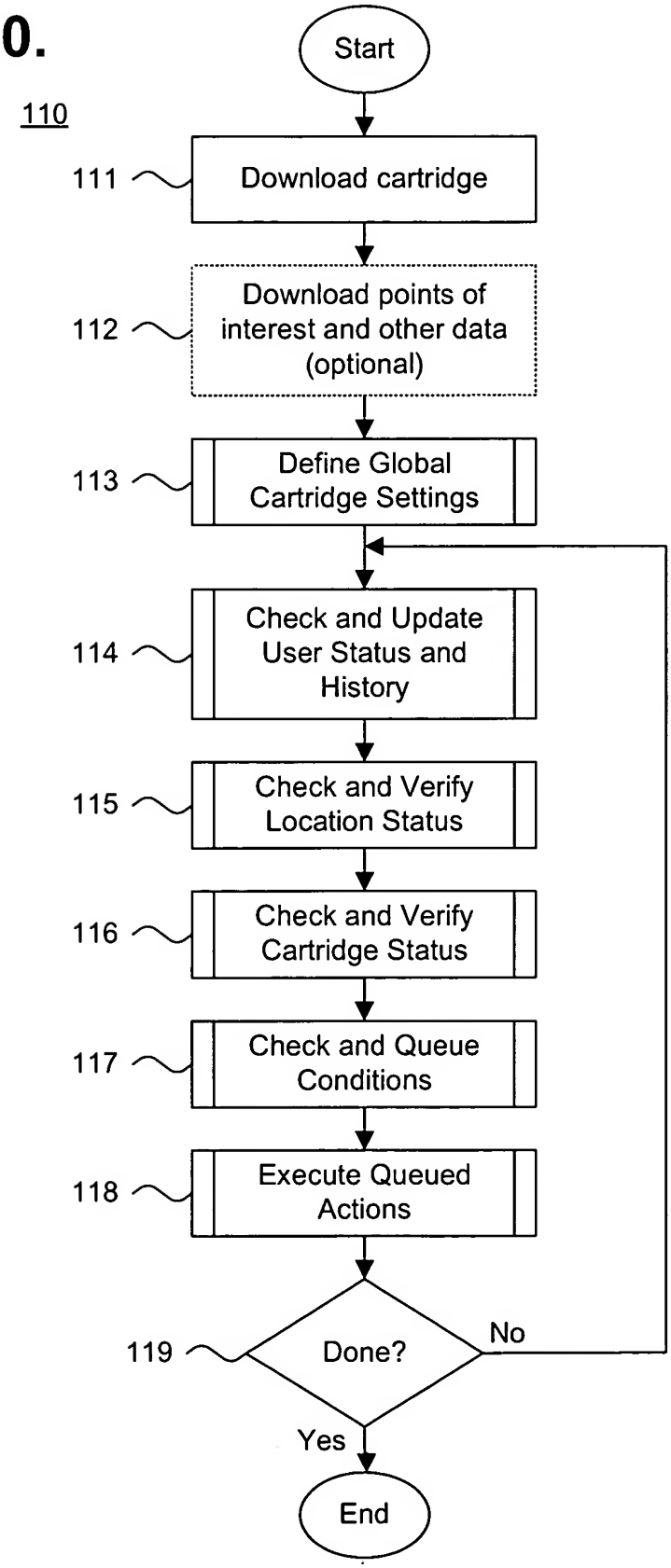

Start
110
111
Download cartridge
112
Download points of interest and other data (optional)
113
Define Global Cartridge Settings
114
Check and Update User Status and History
115
Check and Verify Location Status
116
Check and Verify Cartridge Status
117
Check and Queue Conditions
118
Execute Queued Actions
119
Done?
No
Yes
End

Fig. 11.

120

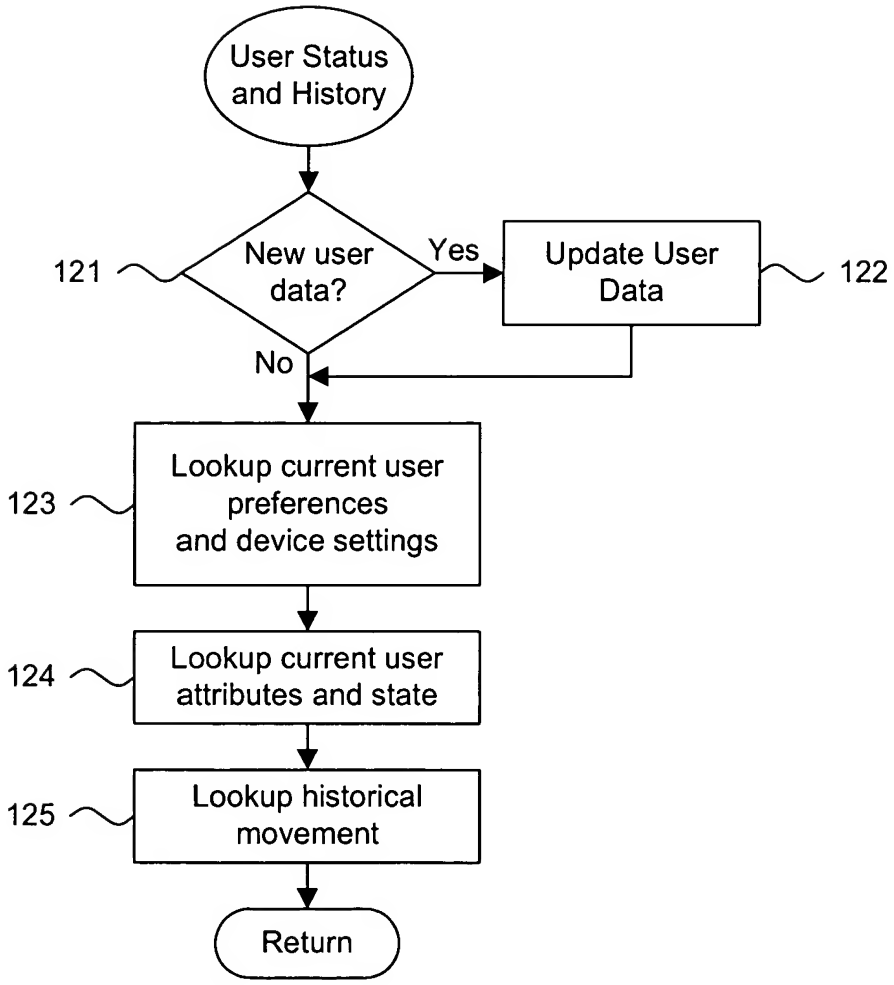

User Status and History
New user data?
121
Yes
Update User Data
122
No
Lookup current user preferences and device settings
123
Lookup current user attributes and state
124
Lookup historical movement
125
Return

Fig. 12.

130

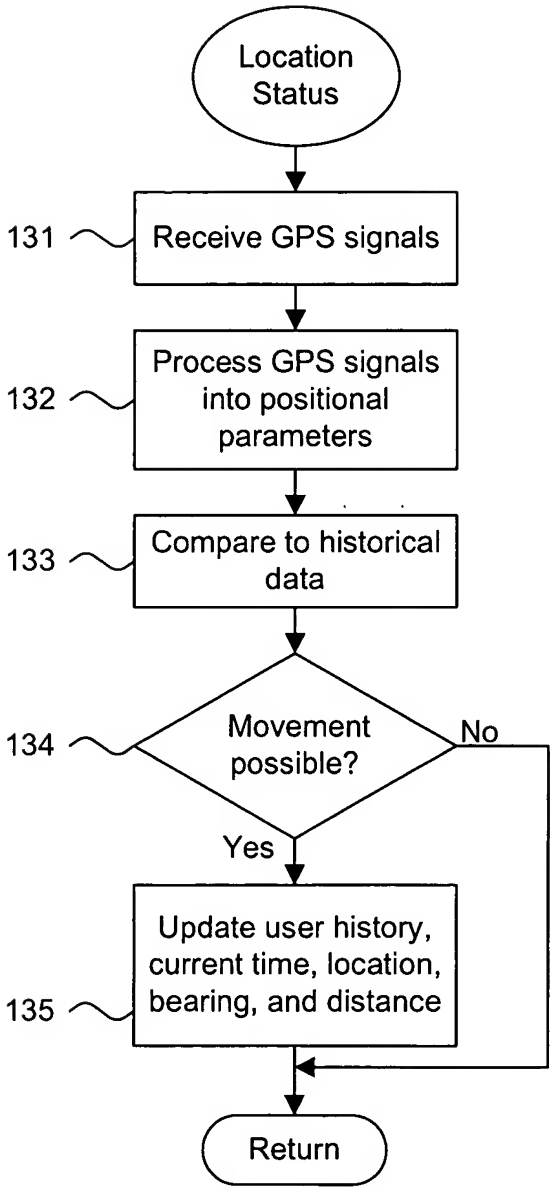

Location Status
131
Receive GPS signals
132
Process GPS signals into positional parameters
133
Compare to historical data
134
Movement possible?
No
Yes
135
Update user history, current time, location, bearing, and distance
Return

Fig. 13.

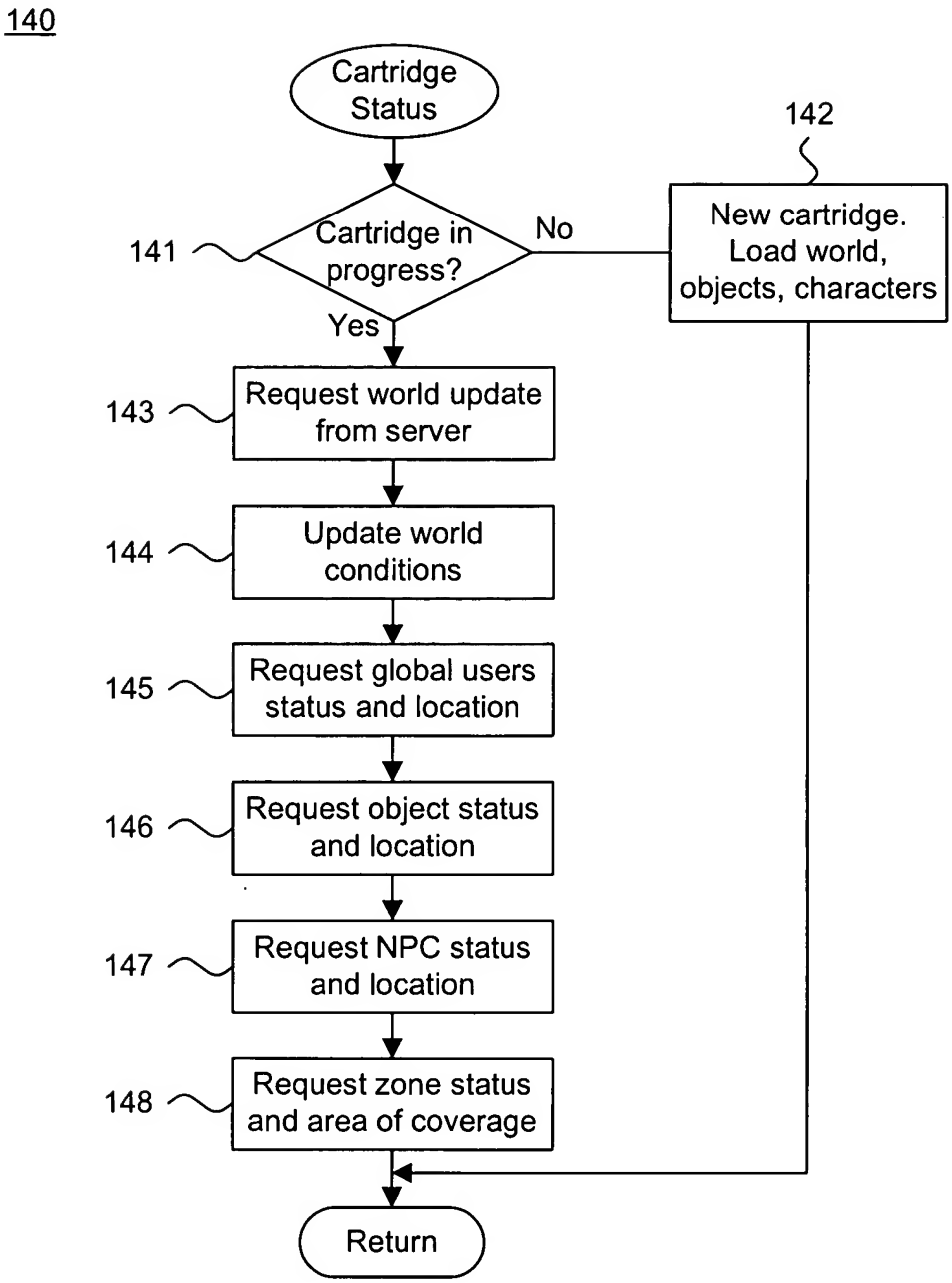

140
Cartridge Status
142
141
Cartridge in progress?
No
New cartridge. Load world, objects, characters
Yes
143
Request world update from server
144
Update world conditions
145
Request global users status and location
146
Request object status and location
147
Request NPC status and location
148
Request zone status and area of coverage
Return

Fig. 14.

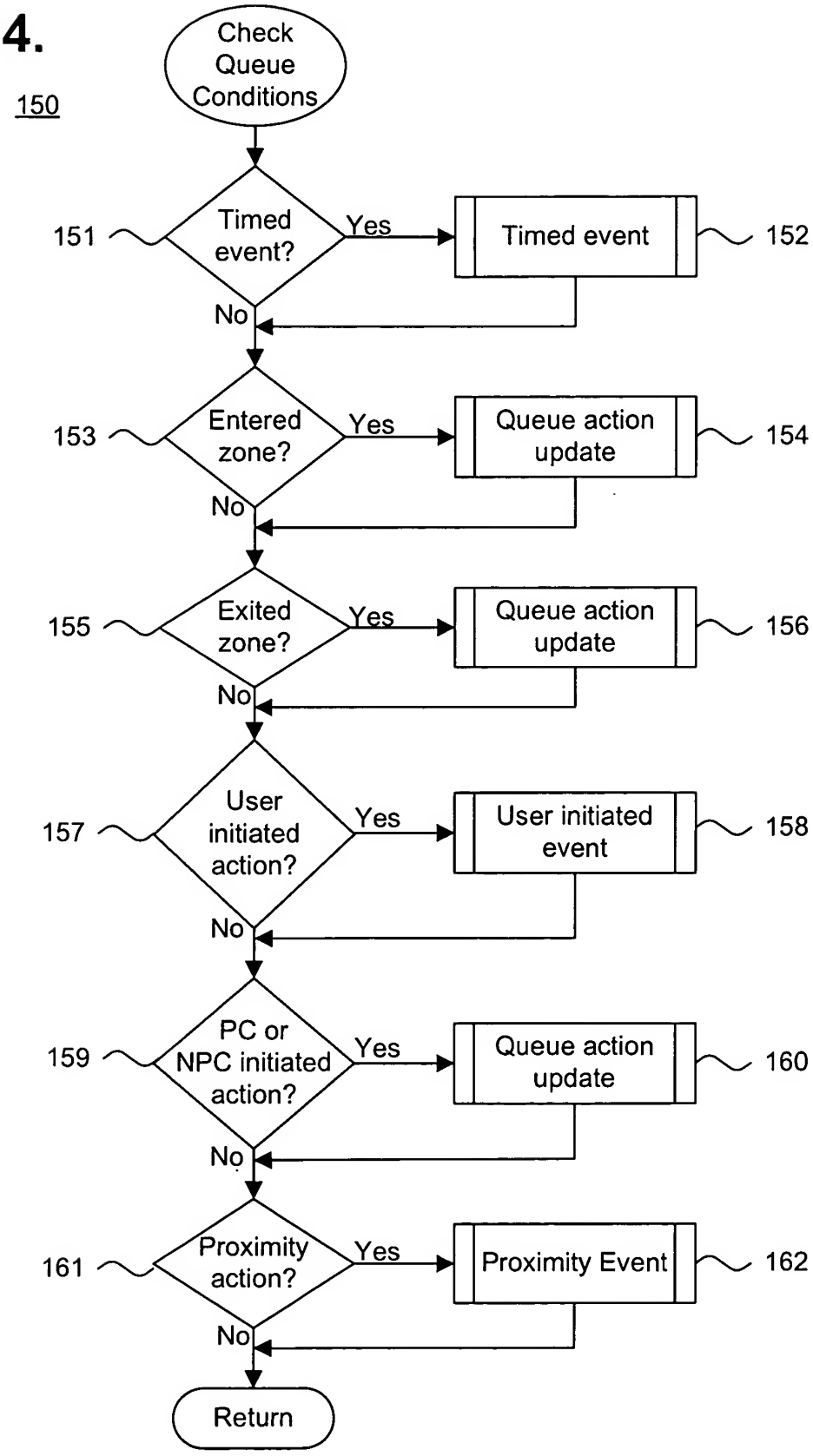

150
Check Queue Conditions
151
Timed event?
Yes
Timed event
152
No
153
Entered zone?
Yes
Queue action update
154
No
155
Exited zone?
Yes
Queue action update
156
No
157
User initiated action?
Yes
User initiated event
158
No
159
PC or NPC initiated action?
Yes
Queue action update
160
No
161
Proximity action?
Yes
Proximity Event
162
No
Return

Fig. 15.

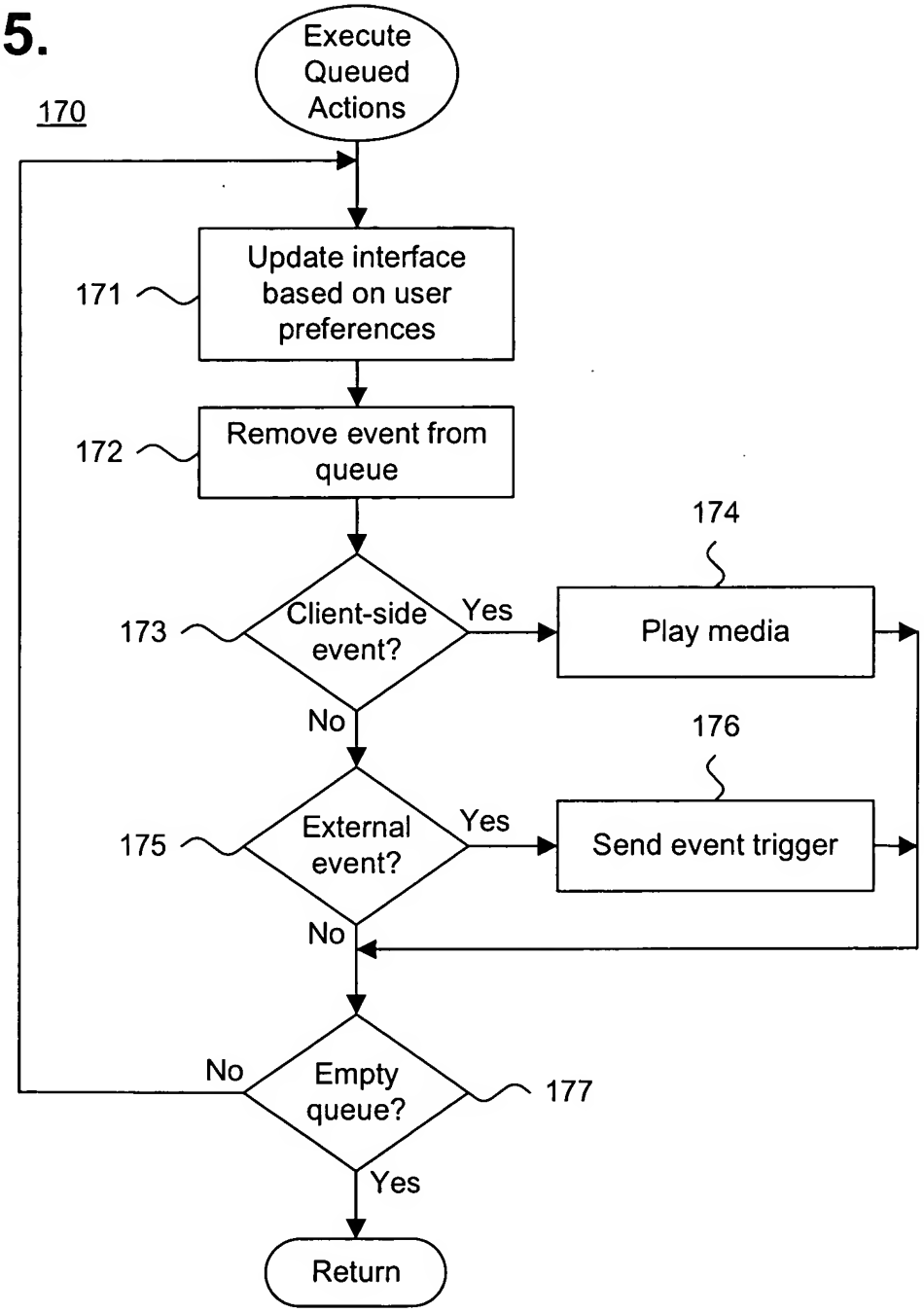

Execute Queued Actions
170
Update interface based on user preferences
171
Remove event from queue
172
174
Client-side event?
173
Yes
Play media
No
176
External event?
175
Yes
Send event trigger
No
Empty queue?
No
177
Yes
Return

Fig. 16.

180

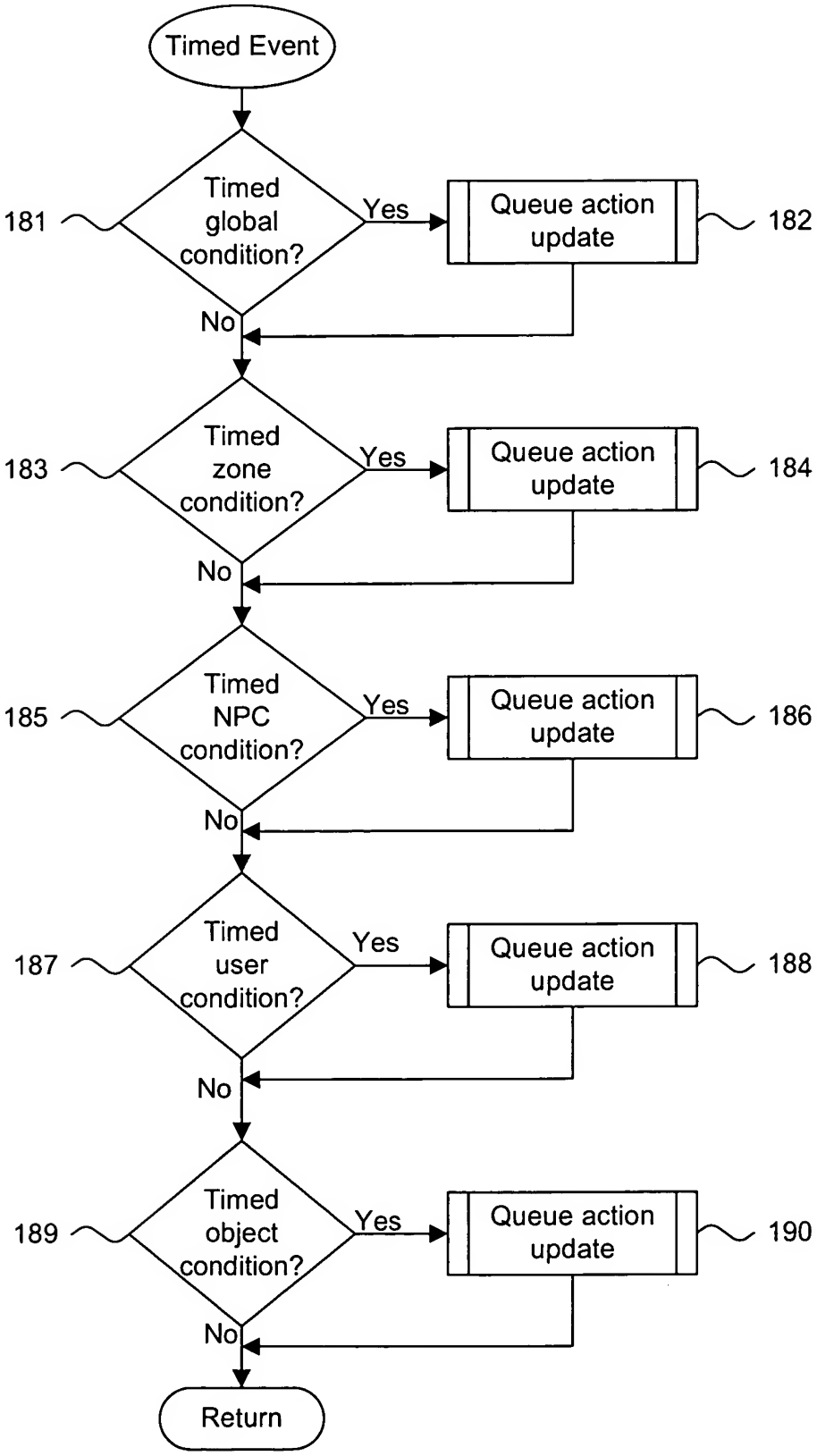

Timed Event
Timed global condition?
Yes
Queue action update
181
182
No
Timed zone condition?
Yes
Queue action update
183
184
No
Timed NPC condition?
Yes
Queue action update
185
186
No
Timed user condition?
Yes
Queue action update
187
188
No
Timed object condition?
Yes
Queue action update
189
190
No
Return

Fig. 17.

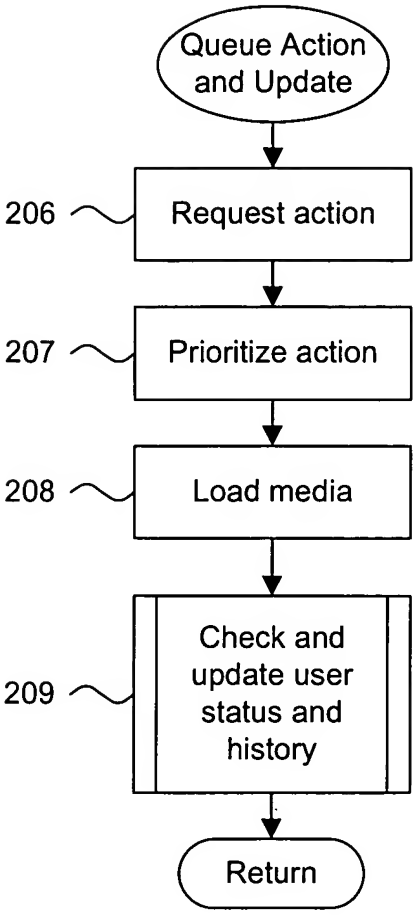

205
Queue Action and Update
206
Request action
207
Prioritize action
208
Load media
209
Check and update user status and history
Return

Fig. 18.

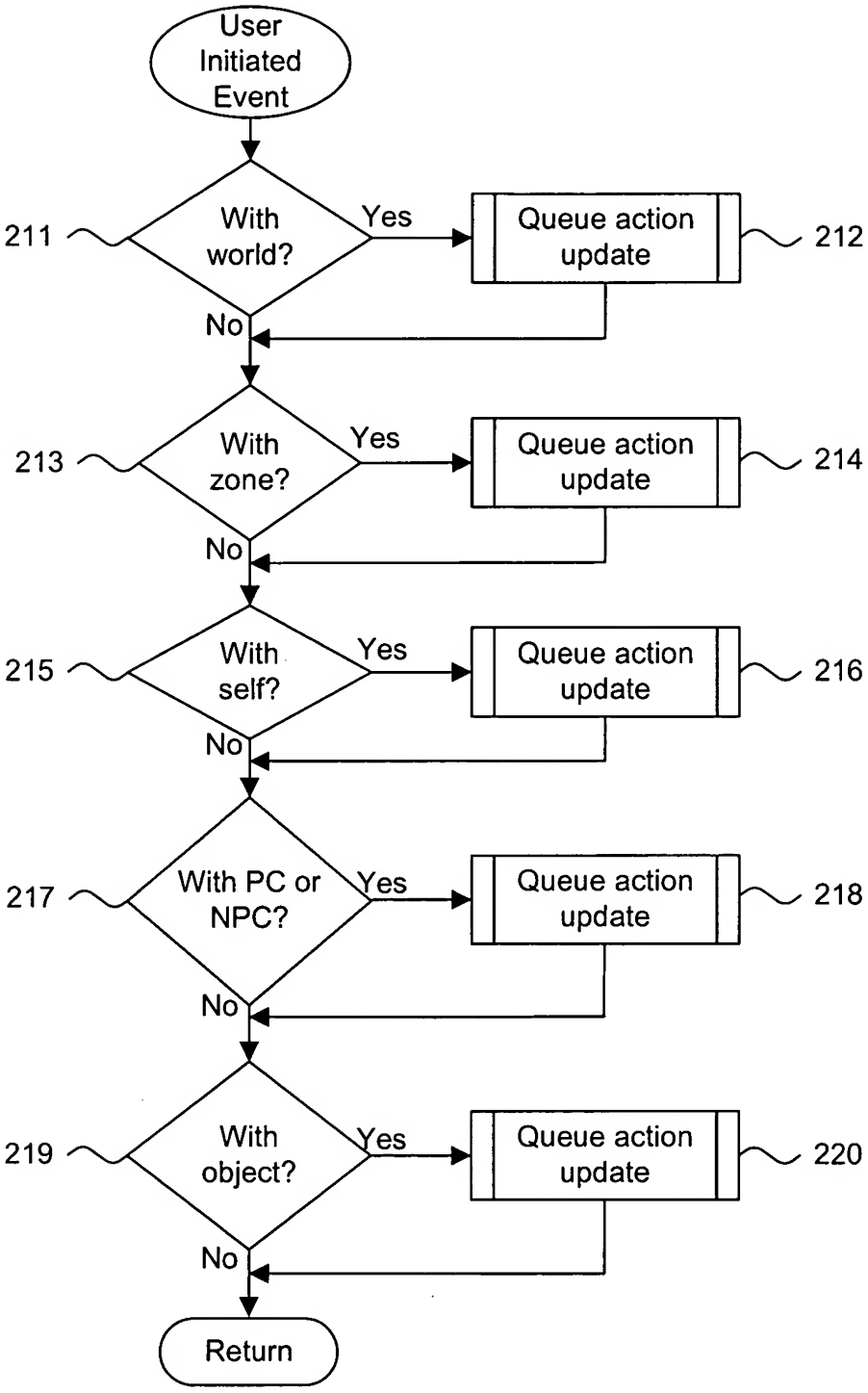

210
User Initiated Event
211
With world?
Yes
Queue action update
212
No
213
With zone?
Yes
Queue action update
214
No
215
With self?
Yes
Queue action update
216
No
217
With PC or NPC?
Yes
Queue action update
218
No
219
With object?
Yes
Queue action update
220
No
Return

Fig. 19.

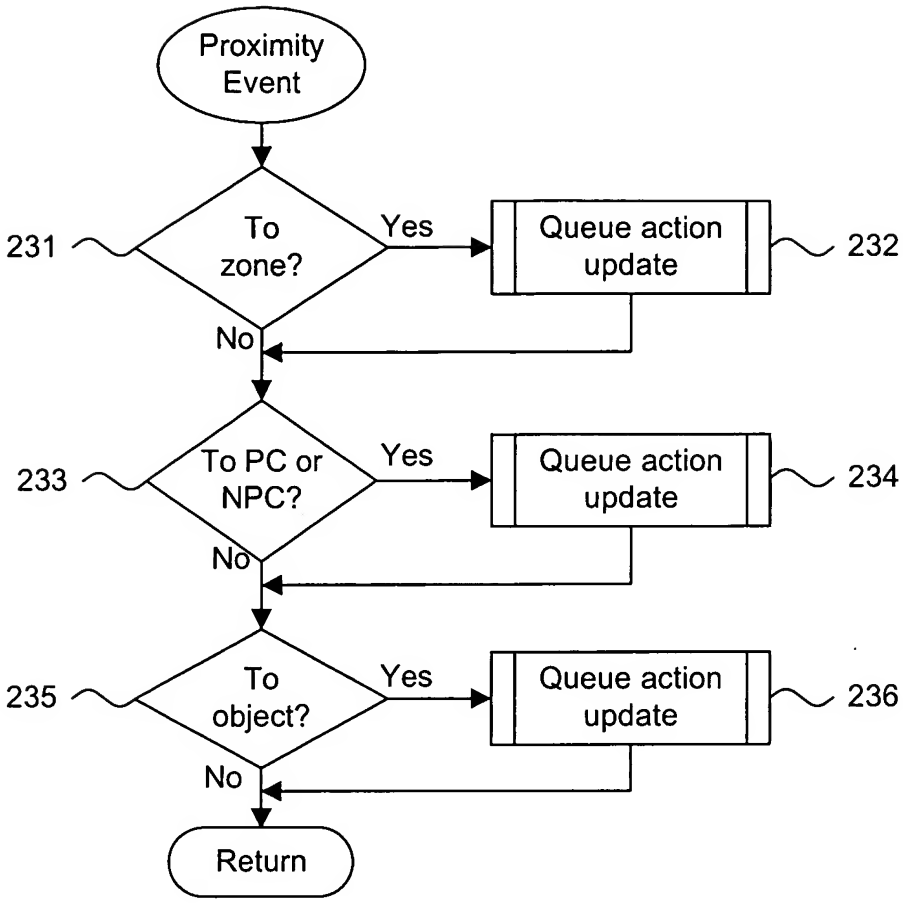

230
Proximity Event
231
To zone?
Yes
Queue action update
232
No
233
To PC or NPC?
Yes
Queue action update
234
No
235
To object?
Yes
Queue action update
236
No
Return

Fig. 20.

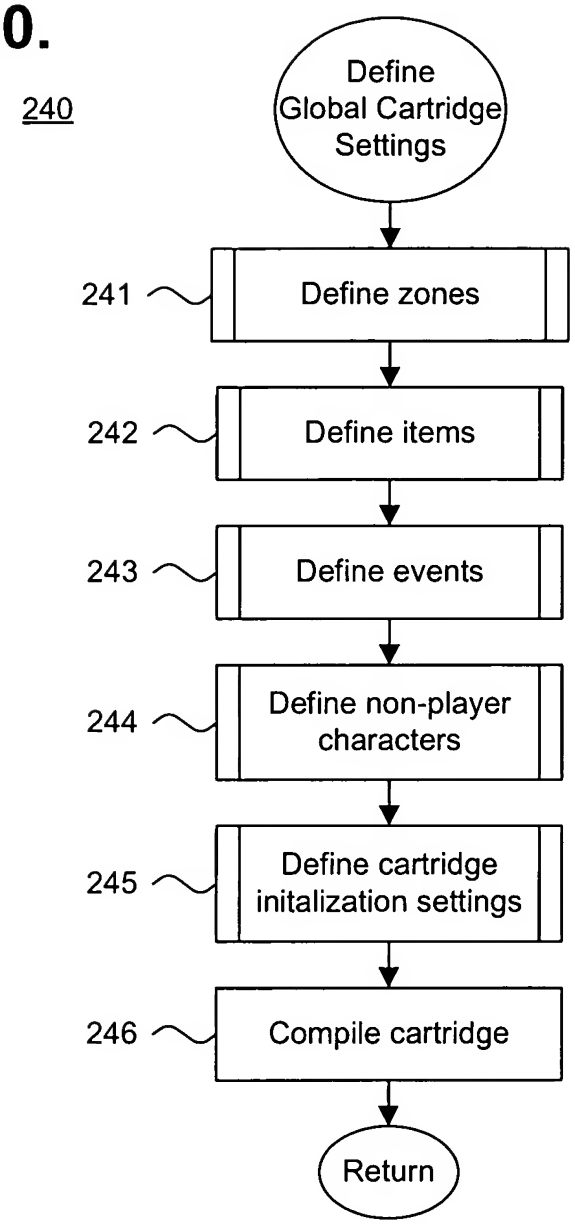

240
Define Global Cartridge Settings
241
Define zones
242
Define items
243
Define events
244
Define non-player characters
245
Define cartridge initalization settings
246
Compile cartridge
Return

Fig. 21.

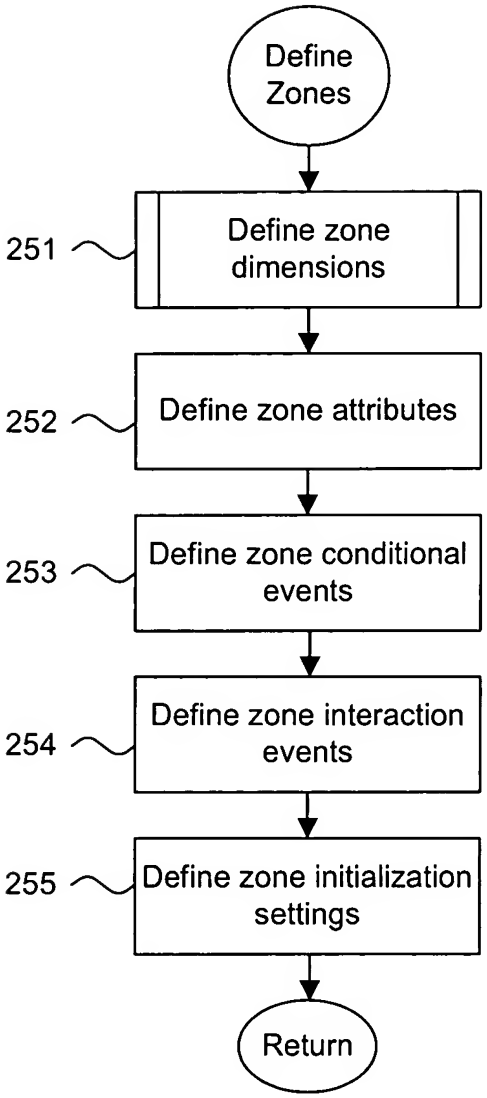

250
Define Zones
251
Define zone dimensions
252
Define zone attributes
253
Define zone conditional events
254
Define zone interaction events
255
Define zone initialization settings
Return

Fig. 22.

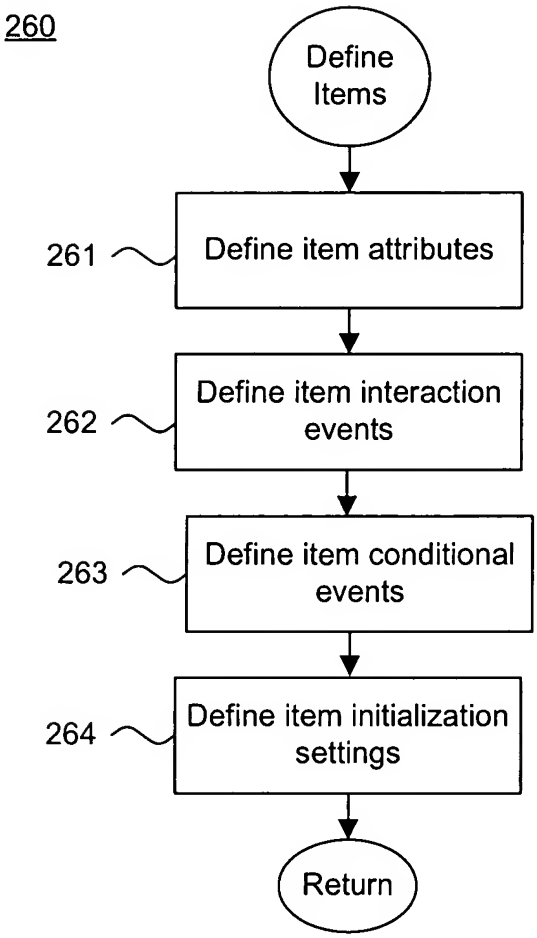

260
Define Items
261
Define item attributes
262
Define item interaction events
263
Define item conditional events
264
Define item initialization settings
Return

Fig. 23.

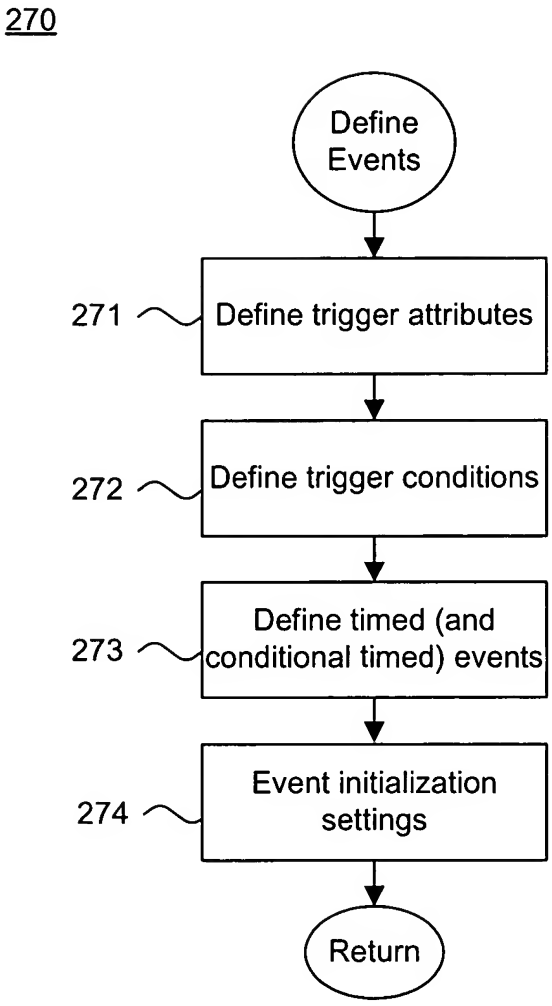

270
Define Events
271
Define trigger attributes
272
Define trigger conditions
273
Define timed (and conditional timed) events
274
Event initialization settings
Return

Fig. 24.

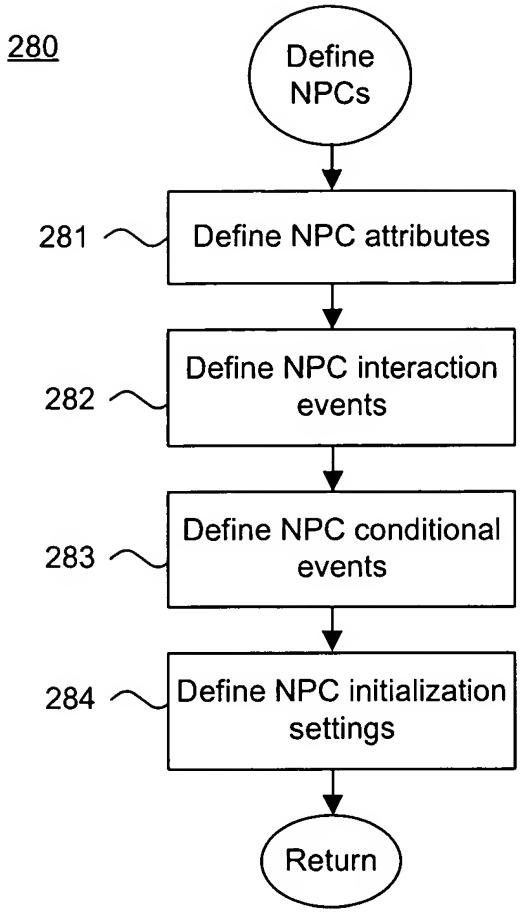

280
Define NPCs
281
Define NPC attributes
282
Define NPC interaction events
283
Define NPC conditional events
284
Define NPC initialization settings
Return

Fig. 25.

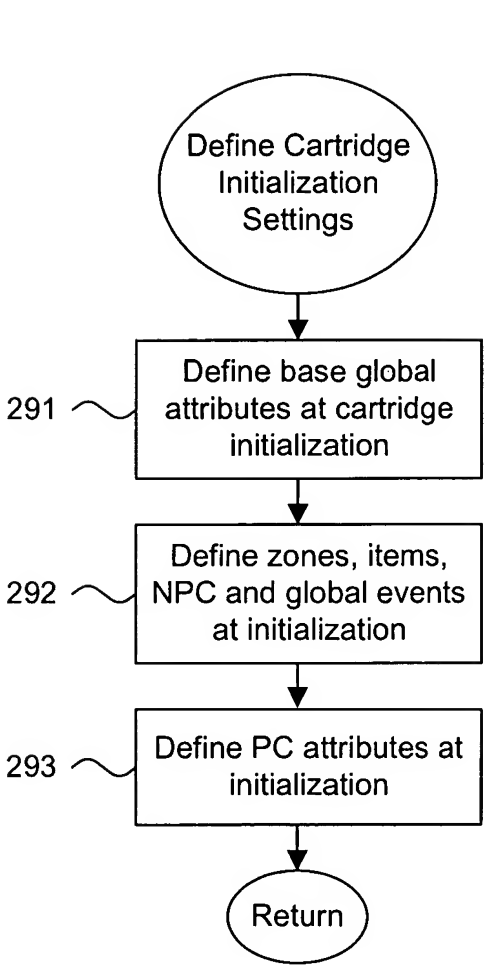
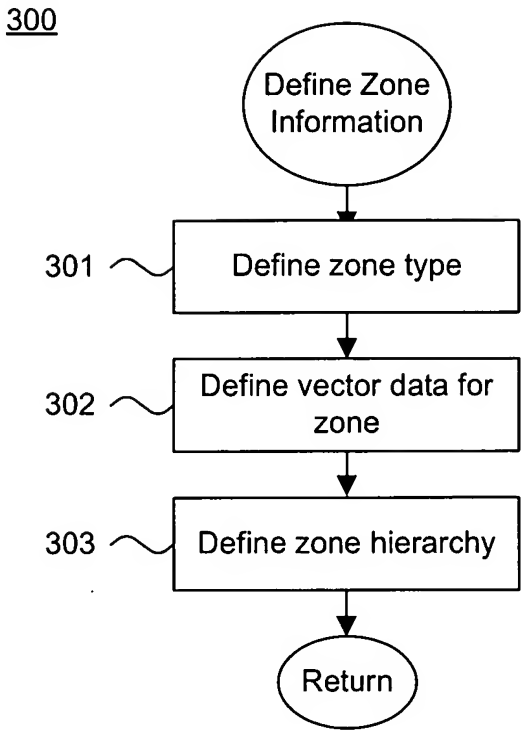

290
Define Cartridge Initialization Settings
291
Define base global attributes at cartridge initialization
292
Define zones, items, NPC and global events at initialization
293
Define PC attributes at initialization
Return

Fig. 26.


300
Define Zone Information
301
Define zone type
302
Define vector data for zone
303
Define zone hierarchy
Return